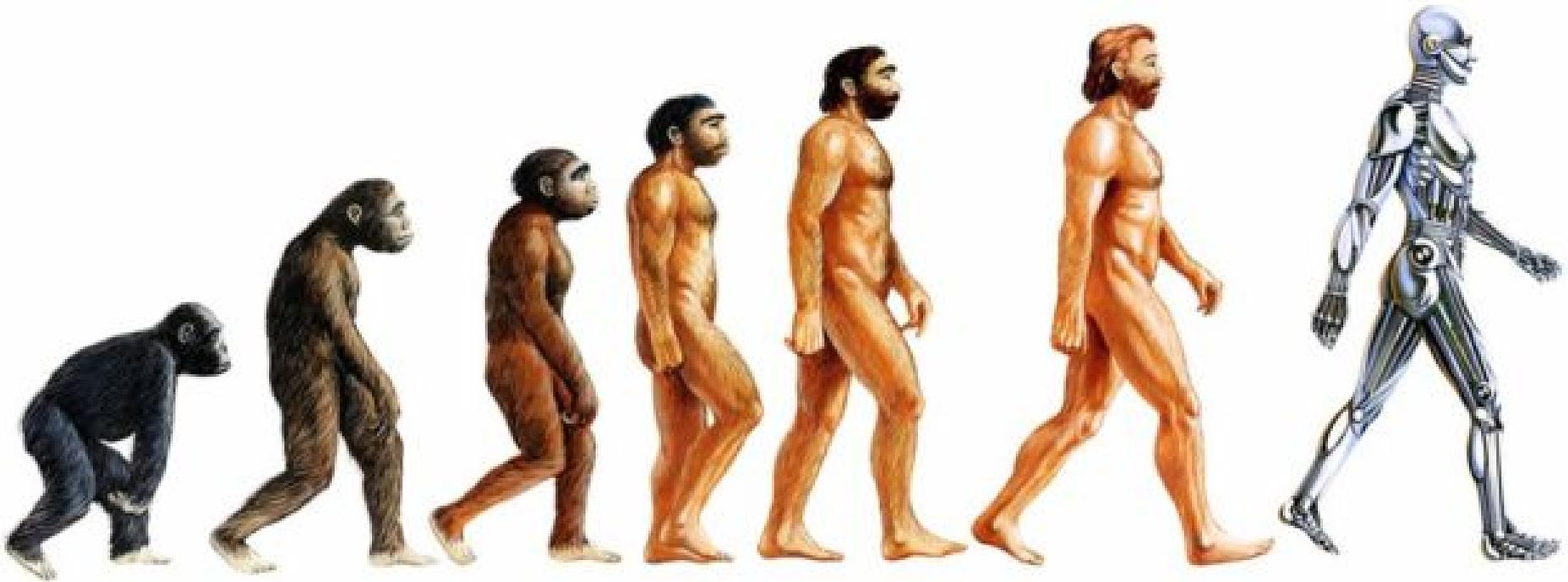
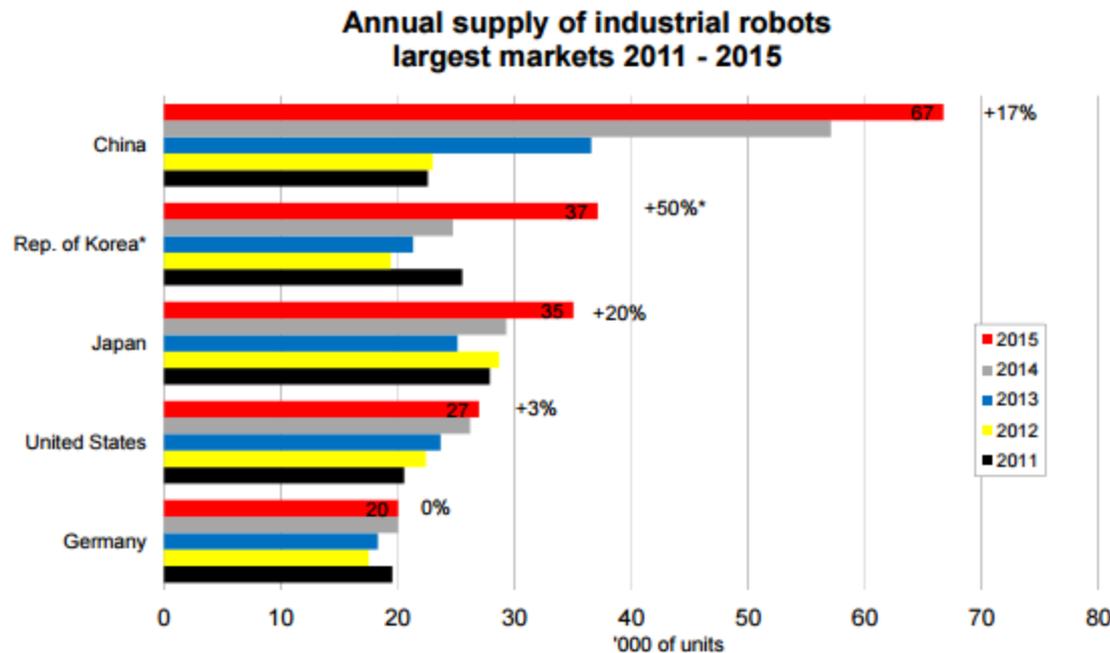


1. Will a robot take your job?



2. Supply of industrial robots [in thousands] 2015: note rise of Korea & China; Japan's decline: 1st to 3rd

2015: 75% of the global supply in 5 markets



Source: IFR Statistical Department

IFR
statistical
department

Hosted by





3. Mercedes-Benz Production of 2013 C Class

<https://youtu.be/r5xmVPr8Aa8?t=34s>

4. Chinese cell phone factory replaced 90% of workers with robots; production increased 250%; defects fell from 25% to 5%



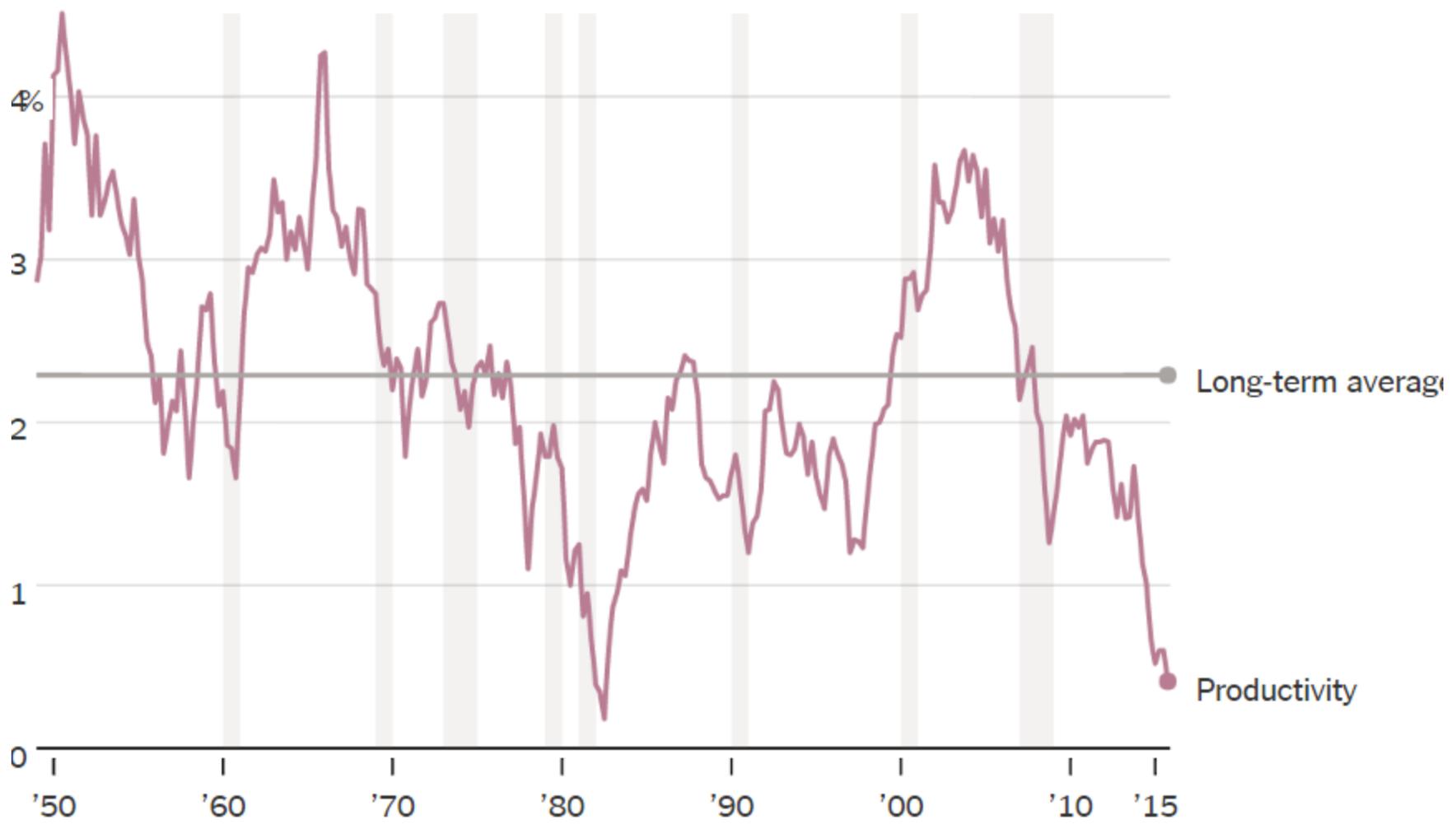


5

Productivity Growth Is Slowing

Americans' output per hour of work is growing more slowly than it has since the early 1980s.

Five-year rolling average of annual productivity growth



Shaded areas indicate recession.

Source: Labor Department

6. Luddites—1790's, 1811-1813



Frame - Breaking. **£.200 Reward.**

WHEREAS, on Thursday Night last, about Ten o'Clock, a great Number of Men, armed with Pistols, Hammers and Clubs, entered the Dwelling-house of *George Ball*, framework-knitter, of Lenton, near Nottingham, disguised with Masks and Handkerchiefs over their Faces, and in other ways,---and after striking and abusing the said *George Ball*, they wantonly and feloniously broke and destroyed five STOCKING FRAMES, standing in the Work-shop: four of which belonged to *George Ball*, and one Frame, 40 gage, belonging to Mr. *Francis Braithwaite*, hosier, Nottingham: all of which were working at the **FULL PRICE.**

NB. The other two Frames were worked to another House, but at the Full Price.

THOMAS REW,
JOHN JACKSON,
THOMAS NAYLOR

Nottingham, 25th January, 1812.

7. Surgical robot doing vascular surgery

Joint Robotics Humanoid Robot-permits use in small batches like plane production



A project being developed by the Joint Robotics Laboratory



8. Which is robot sports reporter?

CHAPEL HILL, N.C. — Marcus Paige scored with nine seconds remaining in the game to give North Carolina a 72-71 lead over Louisville. The Heels held on to win by that same score following a missed 3-pointer by Wayne Blackshear and an unsuccessful second-chance attempt by Terry Rozier.

"Marcus Paige ignored the pain in his twice-injured right foot, put his head down and drove toward the rim." 'I said jokingly to my teammates that I was back,' Paige said."

9. Rehabilitation robot



Robotic arms provide rehabilitation therapy for patients recovering from stroke and other neurological disorders. (Courtesy of Barrett Technology, Inc.)

10. Robot server Japanese hotel



11. Robot delivery service from restaurants
[but will your meal arrive?]



12. Robot ranchers monitor animals on giant Australian farms



13. Rembrandt portrait by computer



14. Robot lawyer donotpay overturned 160,000 parking tickets in London and New York



15. Robots help Amazon workers move inventory





16

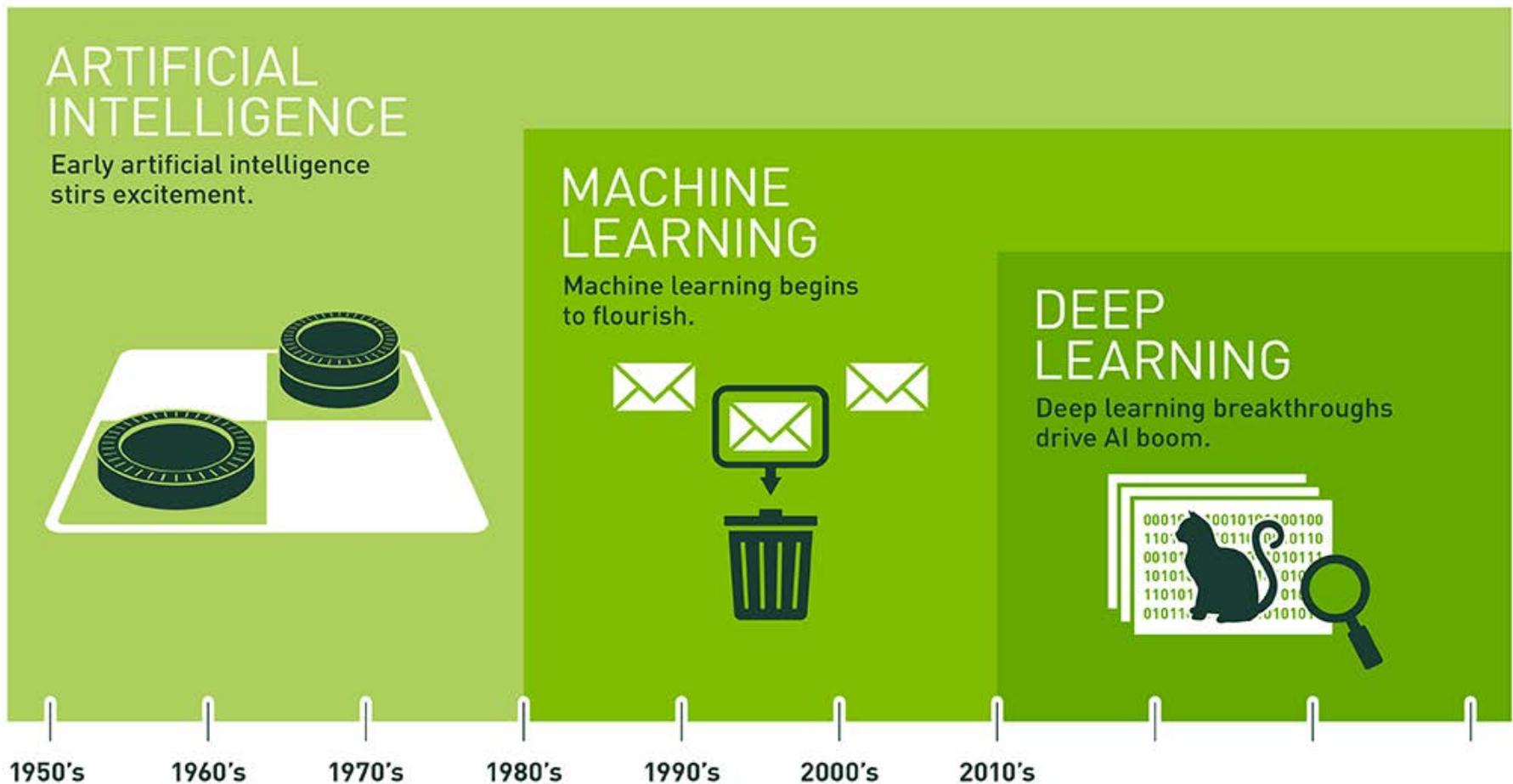
[Chatbot for the disabled,
with Cate Blanchett's voice](#)[video]

17 Machine learning and deep learning are types of AI



Machine learning: training algorithms with large databases to predict results with new data, say image recognition.

Deep learning: computer trains itself on large dbs, learns without human intervention





18 Korean Go-Master, Lee Sedol, Lost to AlphaGo





19 GOOGLE TRANSLATE of a Japanese translation of Hemingway between 2006 and the 2016 update, and not good English:

“Kilimanjaro is 19,710 feet of the mountain covered with snow, and it is said that the highest mountain in Africa. Top of the west, “Ngaje Ngai” in the Maasai language, has been referred to as the house of God. The top close to the west, there is a dry, frozen carcass of a leopard. Whether the leopard had what the demand at that altitude, there is no that nobody explained”

HEMINGWAY IS NO. 1 AND GOOGLE TRANSLATE IS NO. 2, NEARLY OK.

NO. 1: Kilimanjaro is a snow-covered mountain 19,710 feet high, and is said to be the highest mountain in Africa. Its western summit is called the Masai “Ngaje Ngai,” the House of God. Close to the western summit there is the dried and frozen carcass of a leopard. No one has explained what the leopard was seeking at that altitude.

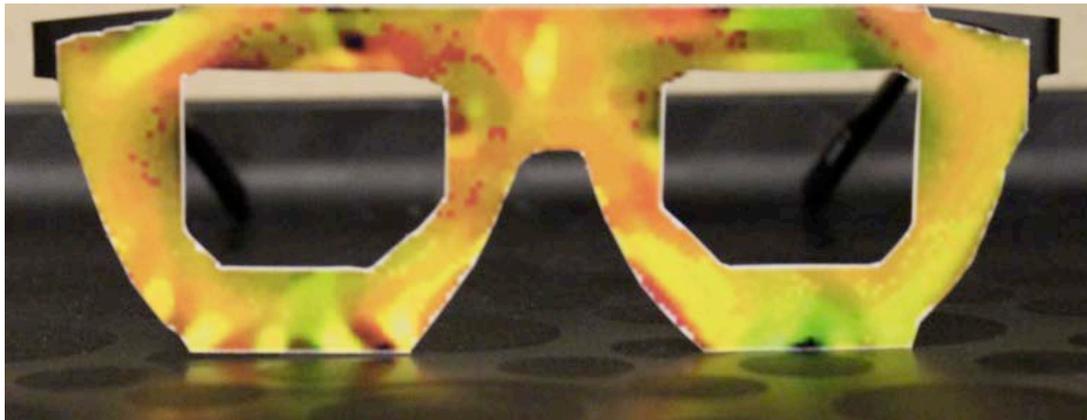
NO. 2: Kilimanjaro is a mountain of 19,710 feet covered with snow and is said to be the highest mountain in Africa. The summit **of the west** is called “Ngaje Ngai” in Masai, the house of God. Near the top **of the west** there is a dry and frozen dead body **of leopard**. No one has ever explained **what leopard** wanted at that altitude.



21. Facial recognition put off by glasses

top images: real person

bottom: identity chosen by facial recognition



Glasses used to defeat software

22. Google box at the top of search page

presidents in the klan



All

Images

News

Videos

Shopping

More

Settings

Tools

About 385,000 results (0.70 seconds)

- President William McKinley.
- President Woodrow Wilson.
- President Warren G. Harding.
- President Harry S. Truman.

REVEALED: 5 US Presidents Members Of Racist Cult Ku Klux Klan ...
www.thetrentonline.com/revealed-5-us-presidents-members-racists-cult-ku-klux-klan-ph...

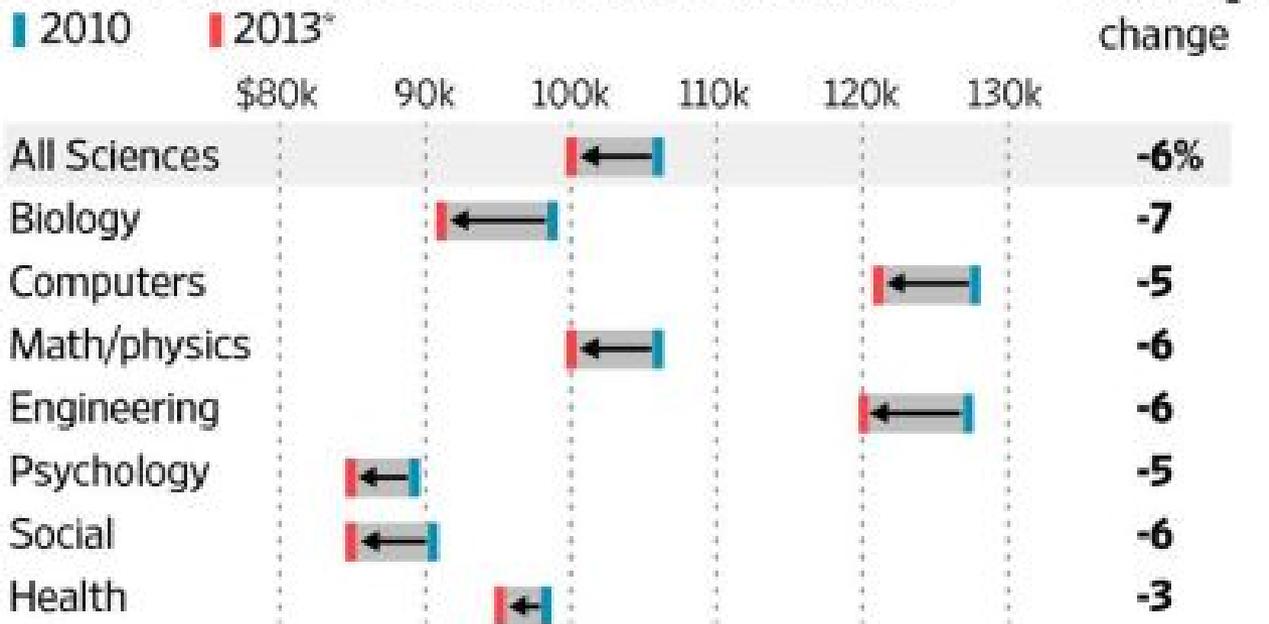
23. Highly educated workers face lower income

Highly educated workers without jobs

Matters of Degree

The percentage of doctorate recipients without jobs or plans for further study has climbed in recent years, while salaries for midcareer Ph.D.s working full-time have declined.

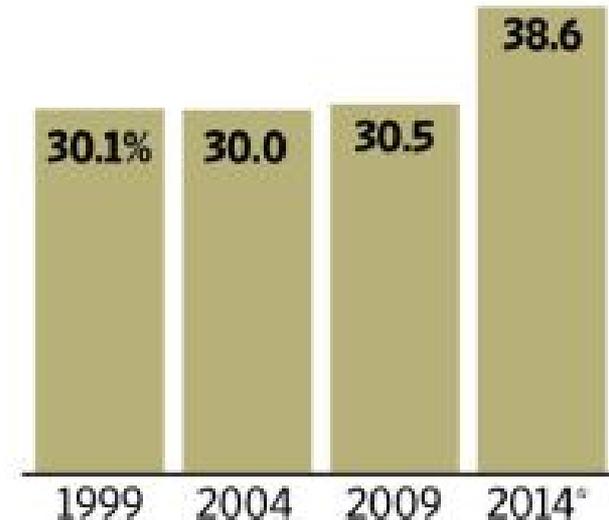
Median salaries for scientists with Ph.D.s by type



*Most recent year data is available

Source: National Science Foundation via Professor Shulamit Kahn, Boston University

Doctorate graduates without a postgraduate commitment



THE WALL STREET JOURNAL.

Occupations that Need More Education for Entry are Projected to Grow Faster

Other available formats: ([XLSX](#))

Employment, wages, and projected change in employment by typical entry-level education (Employment in thousands)

Typical entry-level education	2014 Employment		Employment change, 2014–24 (percent)	Median annual wage, 2015 ⁽¹⁾
	Number	Percent distribution		
Total, all occupations	150,539.9	100.0	6.5	\$36,200
Doctoral or professional degree	4,111.5	2.7	12.2	\$100,490
Master's degree	2,518.8	1.7	13.8	\$66,420
Bachelor's degree	31,848.6	21.2	8.2	\$70,400
Associate's degree	3,458.2	2.3	8.7	\$50,230
Postsecondary nondegree award	9,090.7	6.0	11.5	\$35,660
Some college, no degree	3,785.8	2.5	0.5	\$33,870
High school diploma or equivalent	54,927.4	36.5	3.9	\$36,210
No formal educational credential	40,799.0	27.1	6.9	\$21,420

Footnotes:

¹ Data are from the Occupational Employment Statistics program, U.S. Bureau of Labor Statistics.

Note: The occupational employment and growth rates shown in this table include projected growth in all jobs from 2014–24, not just entry-level jobs. Entry-level education reflects 2014 requirements—BLS does not project educational requirements.

Source: Employment Projections program, U.S. Bureau of Labor Statistics



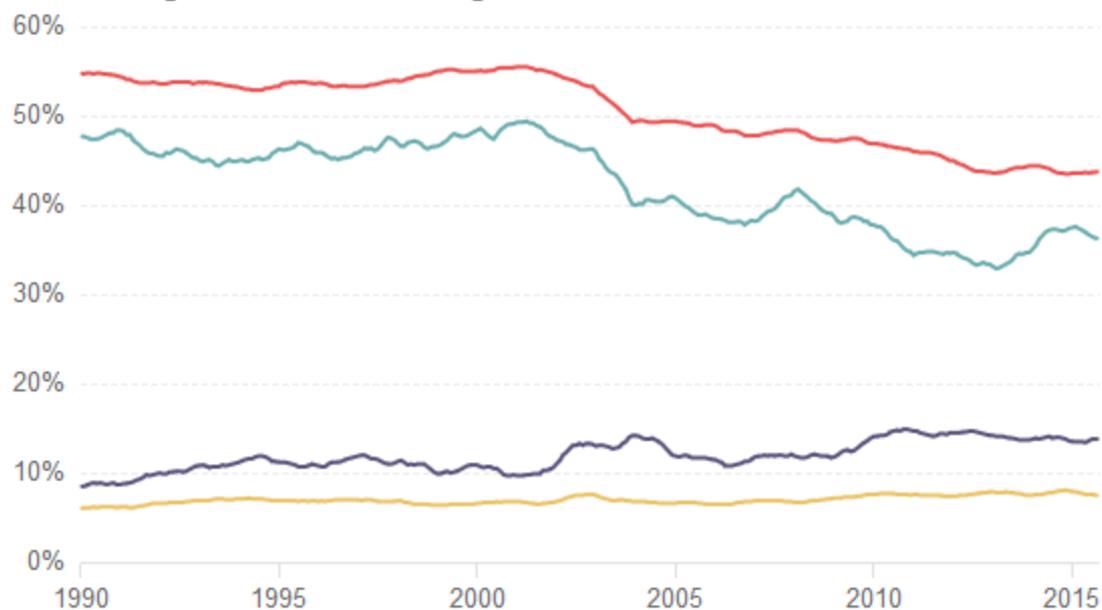
44% of college grads are in good but non-college jobs;

another over 7% in low-wage jobs

25.

Share of Underemployed Graduates in Good
Non-College & Low-Wage Jobs

- Good Non-College Jobs: Recent College Graduates
- Good Non-College Jobs: College Graduates
- Low Wage Jobs: College Graduates
- Low Wage Jobs: Recent College Graduates



Good non-college jobs are those with a full-time average annual wage of roughly \$45,000 or more, while low-wage jobs are those that pay around \$25,000 or less. Rates are calculated as a twelve-month moving average. College graduates are those aged 22-65 with a bachelor's degree or higher, recent college graduates are those aged 22-27 with a bachelor's degree or higher. All figures exclude those currently enrolled in school.

26. EU may tax robots



A "Nao" humanoid robot, by Aldebaran Robotics that offers basic service information, moves during a presentation at a branch of the Bank of Tokyo-Mitsubishi UFJ (MUFG) in Tokyo April 13, 2015. REUTERS/Thomas